

**SALTON SEA  
BIOLOGY FOCUSED TECHNICAL GROUP  
MEETING NOTES**

**February 6, 2008**

**10:00 – 4:00**

**University of California, Riverside - Palm Desert Graduate Center  
Palm Desert, CA**

**Welcome and Introductions**

Arturo Delgado (DWR) welcomed the attendees and led introductions of those present (see attached list).

**Meeting Purpose**

The purpose of the meeting was to review and prioritize the biology key questions. At previous meetings, the group developed the problem statement, goal, objectives, constraints and assumptions, and conceptual models, all of which will become elements of the Monitoring and Assessment Program (MAP) that is being developed.

The document being developed was described as a “living document.” The current document is being developed based on the best available information at this time; as new information becomes available, updates to the document will be incorporated.

**Conceptual Models**

Conceptual models are being developed by each FTG. Experts use conceptual models to demonstrate key critical resources and processes. The models are important because they represent our understanding of the system, and they are used to identify appropriate and necessary monitoring.

Doug Barnum (USGS/Salton Sea Science Office) discussed conceptual models and their use. In particular, he discussed a process for integrating the conceptual models across the resource groups. Doug presented the concept of accepting the conceptual models and resisting the urge to over-define the linkages. In other words, there is value in keeping the conceptual models at a higher order. In order to convey more detail, a series of sub-models could be prepared and referenced. For example, he suggested that the conceptual models could use footnotes on the boxes or arrows to link to key references, supporting documentation, and data. The conceptual models could then be viewed as a package, and could be used to identify the needs for integration across resource groups. Distributing the models to all groups provides the opportunity for developing and identifying linkages.

Example sub-models could include, for instance, selenium cycling, thermodynamics, or groundwater.

The next steps for this process would be for FTG leads to reach agreement within the FTG on the conceptual models and other DQO information. At a working meeting among FTG leads, all of this information would be brought together. A combined document would then be prepared showing the information developed for all resource areas, and would be distributed to all FTGs for their review.

### **Key Questions**

The draft key questions, which had previously been circulated for review and comment, were projected on the screen, discussed, and revised. Through discussion, revisions were made to the list of key questions. The working document developed at the meeting is attached.

Points of discussion included:

- Key questions would include those thought important to advise decision makers as to a path forward.
- Key questions associated with constructed habitat design would also be of high priority.
- Understanding the ultimate use of the collected information is important. For instance, understanding if information to be used by refuge managers may provide insight into appropriate monitoring.
- The question with regard to many of the environmental variables is not only to measure, but to understand the factors that affect changes.
- Understanding the Salton Sea in its regional context is important. For example, populations of eared grebes at Mono Lake or pelicans at the Gulf of California could provide important information in understanding Salton Sea population dynamics.
  - It will be important to be able to identify that population trends are or are not related to conditions at the Salton Sea. For instance, weight on arrival versus weight on departure, or mortality surveys.
  - It was discussed that though monitoring elsewhere is not appropriate, there is a need to identify and interact with others and determine the potential for integration.
- Quagga and zebra mussels may become a bird disease factor in the basin. For instance, loon die-offs in the Great Lakes have been associated with quagga mussels and gobies as an intermediate vector.
- The monitoring identified through the MAP would be appropriate to support a comprehensive monitoring plan that would apply to any potential future project. Through efforts to identify the 5-year plan, it is clear that additional studies will need to be completed to be able to develop a project, and it is likely that such a project would include constructed saline habitat.

### **Key Questions Prioritization**

A matrix was presented as a tool for prioritizing the key questions. The matrix rows included each of the key questions developed above. The matrix columns were:

- Is this question answered through Monitoring & Assessment, Focused Study, Literature Review, or combo?
- Is this information essential in the short-term (0-5 yrs)?
- If not essential in the short-term is information needed for the long-term (5-75 yrs)?
- Would information help determine the condition, variability, or trend of the biological resources?
- Would information collected assist with establishing benchmarks against which data gathered during long-term monitoring can be compared?
- Would information help develop and assess hypothesized relationships among species, habitats, processes, or other causes of variation?
- Would information address existing data gap(s)?

As the group stepped through the matrix for each question, two key assumptions were identified:

- A retrospective analysis, including a literature review, review of historic data, and data gap assessment would be an initial step for all high priority key questions. The retrospective analysis would be incorporated into the MAP document.
- Monitoring includes monitoring, assessment, and evaluation.

The working draft of the prioritization developed at the meeting will be provided for review and comment.

### Biologic Workgroup Meeting Attendees 2/06/08

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